

February 2014

## Can Art Stress?

Bojana Joksimovic-Ginn  
*Savannah College of Art and Design Alumni*

Follow this and additional works at: <https://scholarship.claremont.edu/steam>



Part of the [Fine Arts Commons](#)

---

### Recommended Citation

Joksimovic-Ginn, Bojana (2014) "Can Art Stress?," *The STEAM Journal*: Vol. 1: Iss. 2, Article 16. DOI: 10.5642/steam.20140102.16

Available at: <https://scholarship.claremont.edu/steam/vol1/iss2/16>

© February 2014 by the author(s). This open access article is distributed under a Creative Commons Attribution-NonCommercial-NoDerivatives License.

STEAM is a bi-annual journal published by the Claremont Colleges Library | ISSN 2327-2074 | <http://scholarship.claremont.edu/steam>

---

## Can Art Stress?

### Abstract

Presented in this paper is an interactive, acoustic installation morphologically and functionally influenced by the evolutionarily developed phenomena of two particular defense mechanisms. The first one is the prey's reduction of noise once a predator is detected; the second one is an internal physiological response to danger known as stress. Conducted in a manner of an experiment, this interactive artistic project has interesting and unpredicted results.

### Keywords

art, interactive, acoustic, evolutionary, installation, sculpture

### Creative Commons License



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License](https://creativecommons.org/licenses/by-nc-nd/3.0/).

## **Can Art Stress?**

*Bojana Joksimovic-Ginn*

### **Introduction**

If it could, how would art react to the observer? Being closely analyzed, would it become alarmed, threatened, or uncomfortable? How would art tell us: please, keep your distance?

In nature, many organisms stop their noise production once they sense danger: birds stop singing, deer become very still, and even humans, in situations when they do not want to be detected, stop their action and become quiet. This evolutionary defense mechanism of prey's noise reduction once a predator is detected, serves as a model for the interactive component of the installation. The viewer has the role of a potential predator, while art has the role of the endangered prey. In order to simulate this biological phenomenon, the installation is animated with sound and armed with a motion sensor.

While the prey appears quiet and still on the outside, something completely different is happening inside the prey's body. Stress hormones are activated: adrenalin is rushing, the heart rate is increasing, and the organism is ready to make a run for its life. For millions of years of evolution, stress served as a defense, a life saving mechanism. However, today we know that repeated stress in both humans and animals damages their precious cardiovascular system.

This information influences the morphology of the installation. Delicate forms, made of wire, tape, acrylic gel, and natural fiber, are pierced, torn in places, or semi-nervously assembled. Rather than illustrating the anatomy of the heart, the installation is an abstract three-dimensional drawing composed by the artist's intuition and imagination.

### **Technology/Creation**

Being a three-dimensional drawing, the installation produces the sound of a pencil drawing on paper. The recording of a pencil sound is placed in an iPod, and hidden above the installation. Connected to the iPod through a rudimentary amplification system are five pairs of headphones that are incorporated into the structure, functioning as both the source of the sound, and as lines in space comprising formal elements of the drawing.

Hidden above the structure and connected to the iPod is an Arduino microcontroller. The Arduino acts as a control circuit between a motion sensor and the iPod. When the viewer moves too close to the work, the audio circuit is switched off and the installation becomes quiet. The circuit is switched back on once the viewer returns to a safe distance away.

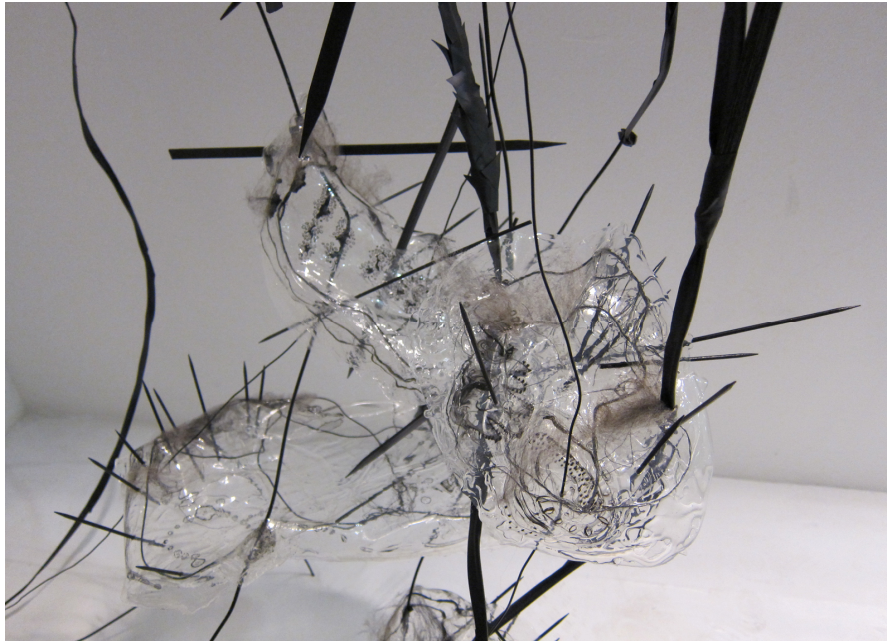


Fig. 1. *De-Stressed*, Multimedia Installation – Detail 1, 2011

## Results and Surprises

The abstract structure looks interesting; it attracts the viewer. The viewer hears the sound. He is not sure where the sound is coming from and he gets closer. At one point, when close to the structure, the motion sensor detects the viewer and the audio signal is switched off. After the viewer returns to a “safe” distance, the motion sensor deactivates the sound. The viewer is not aware of what is going on immediately. It usually takes three to four interactions for the viewer to notice the connection between his movements and the appearance and disappearance of the sound.

Additionally, something unexpected occurred that provided another layer of complexity to what the artist thought would be a very simple interaction. Because of the unexpected complexity of the interactive experience, a few viewers described the structure as “passive-aggressive”. What happened? The motion sensor reacts only when the viewer moves across the

defined border, toward the work, or away from the work. However, if the viewer gets too close and deactivates the sound, but then stands very still while observing the details of the structure, the motion sensor stops detecting motion and the sound is reactivated. The reactivated sound surprises the viewer who was observing closely, and prompts him to move. This motion would then reactivate the sensor and stop the sound. This would additionally confuse the viewer who would react either by moving or being more still and attentive, which would influence the sensor to act accordingly, and so on and on... The art-viewer interaction becomes more complex, organic, and yes, passive-aggressive and even stressful.

## **Conclusion**

The application of scientific models and mechanisms onto materials is the engine of my work. In the world that we live in, the motion and composition of matter are determined by physical laws. These laws are at the base of our own bodies and our interactions with ourselves, other people, and the physical world. How do things change when the natural matter is replaced with artistic entities, yet still organized around the physical or physiological principles? An organism paralyzed by fear from a predator becomes an acoustic installation that stops producing noise when approached too closely by the viewer. When this substitution of artistic elements into the scientific model is made, and certain biological or evolutionary rules still apply to the new constructs, what happens? A continuum of creation is evoked in this process of replication, reconstruction and most importantly, through play and chance, resulting in discovery.